

REMARKS

Claims 1–21 are pending in this application. Non-elected claims 5, 6, 11–14, and 16–21 have been withdrawn from consideration by the Examiner. By this Amendment, claims 1–21 are amended. Support for the amendments to the claims may be found, for example, in the claims and specification as originally filed. No new matter is added.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection under 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 1–4, 7–10, and 15 as being indefinite under 35 U.S.C. §112, second paragraph. By this Amendment, claims 1–4, 7–10, and 15 are amended to obviate the rejection by reciting "product" instead of "composite yarn" in the preamble of these claims. Accordingly, reconsideration and withdrawal of the rejection are requested.

The other amendments made to the claims are made solely to correct other informalities not addressed in the Office Action, not in an attempt to distinguish the claims over the applied references.

II. Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1–4, 7, and 8 under 35 U.S.C. §102(b) over JP 62028435; rejects claims 1–4 and 7–10 under 35 U.S.C. §102(b) over GB 2,032,483 to Okie et al. ("Okie"); and rejects claims 1–4 and 7–10 under 35 U.S.C. §102(b) over U.S. Patent No. 4,265,972 to Rudner ("Rudner"). Applicants respectfully traverse the rejections.

Each of claims 1–4 and 7–10 require that the "fibers forming the filament yarn are uniformly distributed in the matrix made of polymeric material." None of the references applied in these rejections expressly or inherently discloses this feature, and the Office Action does not address this limitation. Thus, the references do not anticipate the claims, and the rejections are improper.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

III. Rejections Under 35 U.S.C. §103

A. Okie or Rudner, taken with Carette

The Office Action rejects claim 15 under 35 U.S.C. §103(a) over Okie or Rudner, taken with U.S. Patent No. 5,278,218 to Carette et al. ("Carette"). Applicants respectfully traverse the rejection.

As discussed above, neither Okie nor Rudner discloses that the "fibers forming the filament yarn are uniformly distributed in the matrix made of polymeric material." Carette, which is relied upon by the Office Action for its alleged disclosure of a flame retardant filler, is not asserted by the Office Action as teaching or otherwise rendering obvious "fibers forming the filament yarn are uniformly distributed in the matrix made of polymeric material."

As such, the rejection is improper because the Office Action fails to establish a *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Conesa taken with Rudner or JP 62028435

The Office Action rejects claims 1–4, 8–10, and 15 under 35 U.S.C. §103(a) over U.S. Patent Application Publication No. 2005/0042447 to Conesa et al. ("Conesa") taken with Rudner or JP 62028435. Applicants respectfully traverse the rejection.

1. Conesa and JP 62028435

The Office Action asserts that JP 62028435 teaches that it was well known in the art to include a foamed polymer of PVC as the matrix to make a yarn absorb sound. Applicants respectfully disagree.

The Office Action only provides an English-language abstract of JP 62028435. This abstract indicates that the advantage of its disclosure is that the sound absorbing material absorbs sound waves within a wide range of frequencies and with a high sound-absorbing coefficient. This abstract further indicates that the sound absorbing material consists of a woven fabric prepared from organic or inorganic fiber yarn surface-coated with a porous polymer, wherein the coated yarns are arranged at desired intervals in lengthwise and/or crosswise directions, and that this woven fabric has a thickness of 0.2 to 3 mm and is covered with flocked naps.

This abstract does not attribute the sound absorbing advantages to the porous polymer. In fact, the abstract does not attribute the sound absorbing advantages to any particular feature described in the abstract but, instead, attributes the asserted advantages to the sound absorbing material itself. There is no indication in the abstract whether the asserted advantages are attributable to a single feature, a combination of some of the features, or a combination of all the features of its sound absorbing material.

Thus there is no factual basis to the Office Action's assertion that JP 62028435 teaches advantages of coating a yarn with a foamed polymer. Accordingly, the Office Action fails to present a valid reason or rationale as to why one of skill in the art would have modified the composite yarn of Conesa in view of JP 62028435. Therefore, Applicants respectfully request reconsideration and withdrawal of this ground of the rejection.

2. Conesa and Rudner

The Office Action asserts that Rudner teaches that it was well known in the art to include a foamed polymer of PVC as the matrix to make a yarn breathable. However, the Office Action fails to establish why one of skill in the art would have modified the composite yarn of Conesa to be breathable. The Office Action's does nothing more than assert that the references relied upon teach that all aspects of the claimed invention were individually

known. Without an objective reason to combine the teachings of the references, such an assertion is not sufficient to establish a *prima facie* case of obviousness. *See* MPEP §2143.01(IV).

Conesa is concerned with improving the fire behavior of fabrics, particularly fabrics used for the manufacture of blinds and curtains. *See* Conesa at paragraphs [0001] and [0015]. Conesa does not indicate that it was concerned with the breathability of its composite yarns. There is nothing on the record that indicates that the composite yarns of Conesa are not breathable. The record does not establish that the breathability of Conesa's yarns would have been reasonably expected to be improved by using the foamed polymers taught by Rudner, nor does it establish that improved breathability of Conesa's yarns would have been desirable or otherwise advantageous at the time of the invention.

Applicants' disclosure also does not recognize that using a foamed polymer improves breathability of Conesa's yarns. However, the disclosure does indicate that Applicants were concerned with other problems with Conesa's composite yarns. *See* specification, page 3, line 4 *et seq.*, where it discusses "the composite yarn described in patent application 01/17047 filed in France on 28/12/2001"; Conesa claims foreign priority to FR 01/17074. Applicants indicate the Conesa's composite yarns were not sufficiently opaque for certain applications, necessitating the use of opacifying fillers. *Id.* However, these fillers are abrasive and break the filaments of the yarn, especially when the composite yarns are weaved together, or when textiles comprising the yarns are handled. *Id.*

Applicants discovered that using a foamed polymeric material as the material forming the core enables a yarn to be obtained that has the same properties towards light as it has when opacifying fillers, such as those previously mentioned, are incorporated; that is to say the fibers forming the filament yarn are masked and no longer allow light to pass. *See* specification, page 6, lines 6–13.

The specification further indicates that the opacifying properties of the foamed polymeric materials have been verified by photography, and it has been observed that when the yarn comprises a core in which the fibers are uniformly distributed in a foamed polymeric matrix, the fibers are no longer visible and the result is comparable with that obtained by adding an opacifying filler such as zinc sulfide and titanium dioxide. *See specification, page 15, lines 13-21.*

Applicants include below three photographs illustrating the opacifying properties of the claimed invention:

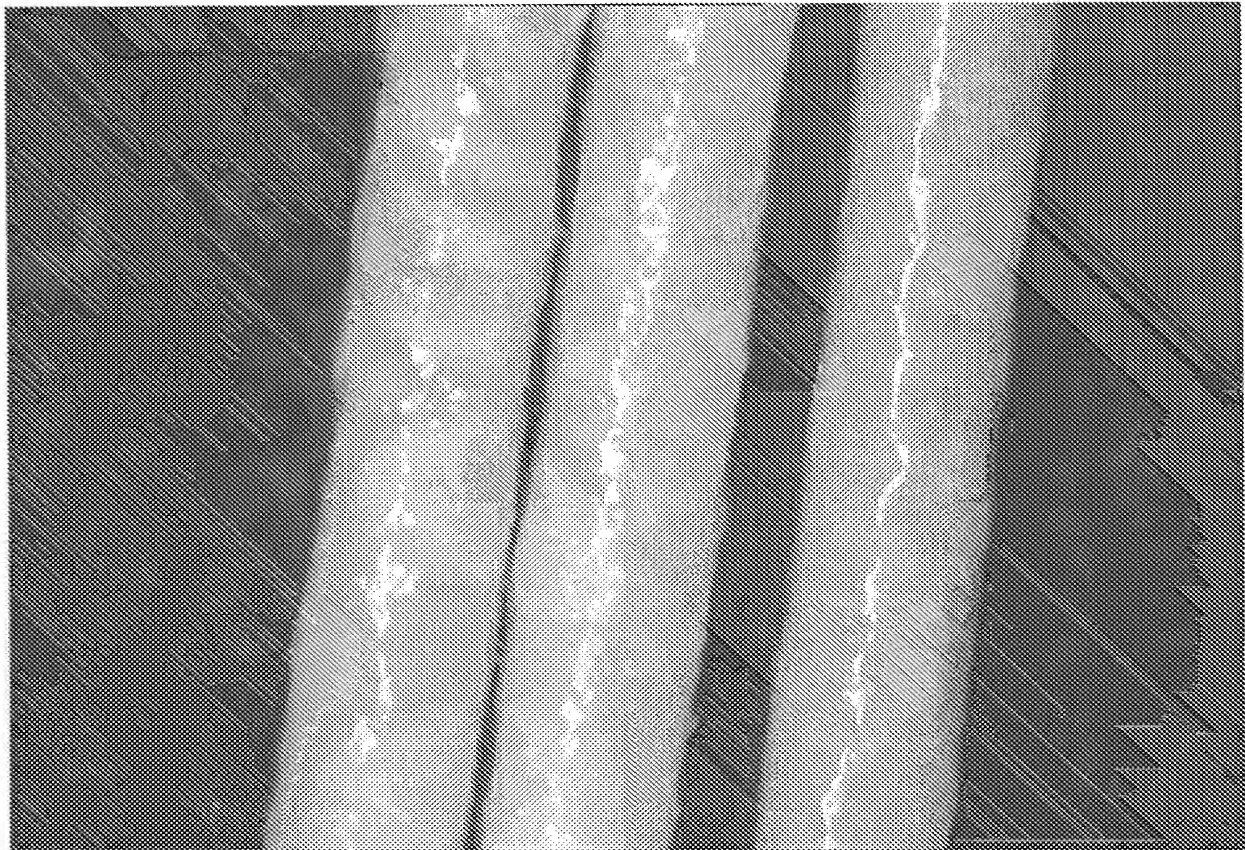


Figure 1. Light transmission photograph of 3 "standard" yarns comprising glass fibers coated with polymer, where the fibers are not uniformly distributed in the matrix. The light source was above the yarns.

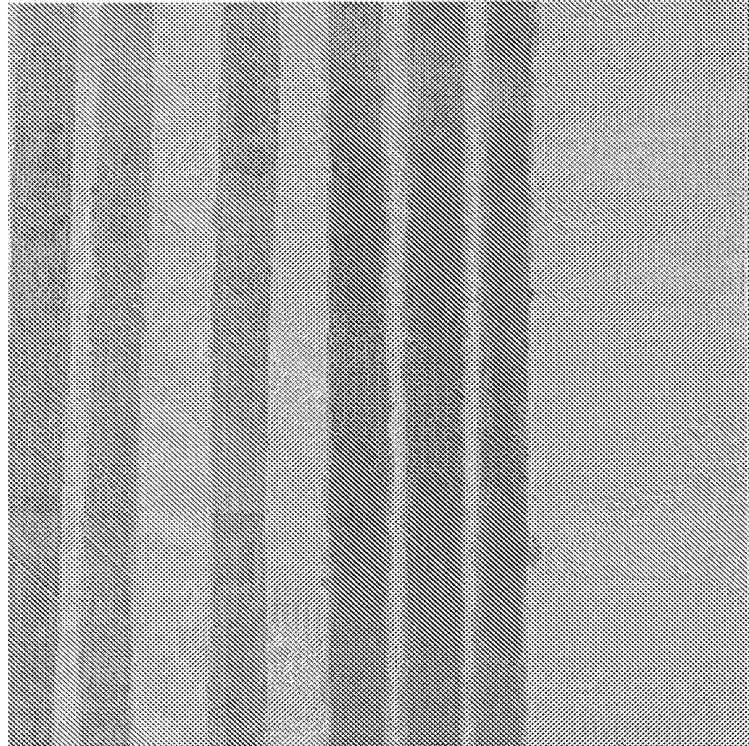


Figure 2. Light transmission photograph of 3 of Conesa's composite yarns (left side) and 3 yarns as claimed (right side). The light source was under the yarns.

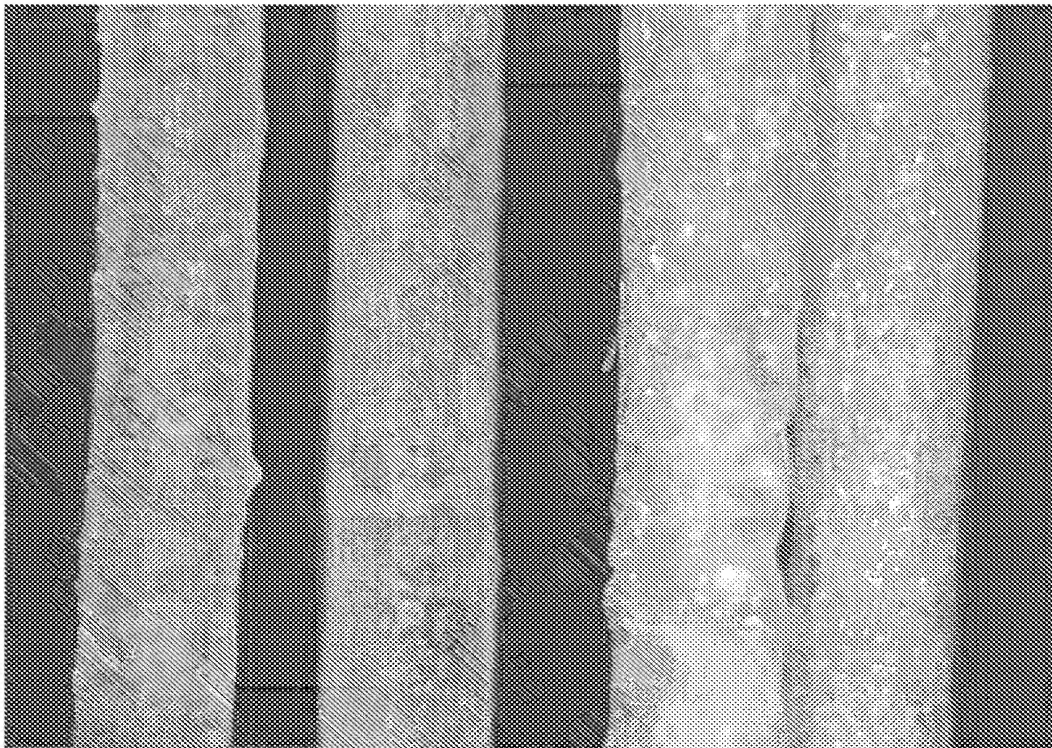


Figure 3. Light transmission photograph of 2 of Conesa's composite yarns (left side) and 2 yarns as claimed (right side). The light source was above the yarns.

Improved opacity by using a foaming agent is a result that is unexpected over the teachings of the applied references. None of the applied references teach or suggest that such a result could have been obtained by using a foamed polymer in Conesa's composite yarns.

For at least these reasons, Applicants respectfully submit that claims 1–4, 8–10, and 15 would not have been rendered obvious as asserted by the Office Action in this rejection. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

IV. Rejoinder

For the reasons presented above, the subject matter common to all the claims is a technical feature that defines a contribution over the prior art. Thus, Applicants respectfully submit that unity of invention exists between all the claims, and request that the non-elected species and claims be rejoined and examined.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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